

IN THE CLAIMS

Page 11, line 1, change "Patent Claims" to --What is claimed is:--.

Claims 1-17 (cancelled).

18. (New) The plasma radiation source comprising:

a source region in a vacuum chamber for emitting radiation at a defined solid angle through a gas curtain that is provided for debris suppression along an axis of the mean direction of propagation of the radiation;

said gas curtain being a radially directed supersonic gas jet, proceeds from a propulsion nozzle of a gas jet vacuum pump;

said propulsion nozzle being arranged on an axis of the mean propagation direction of the radiation; and

said gas curtain being directed to an annular mixing nozzle of the gas jet vacuum pump arranged coaxial to the axis and being guided out of the vacuum chamber by a diffuser.

19. (New) The plasma radiation source according to claim 18, wherein a discharge is used for plasma excitation and an electrode arrangement with anodes and cathodes arranged next to one another along the axis of the mean propagation direction of the radiation is provided for the discharge.

20. (New) The plasma radiation source according to claim 19, wherein liquid metal electrodes are used as electrodes.

21. (New) The plasma radiation source according to claim 20, wherein the liquid metal electrode has a carrier which is penetrated by a supply channel for a liquid emitter and which is coated at its end facing the plasma with a high-melting porous material into which the supply channel opens.

22. (New) The plasma radiation source according to claim 20, wherein the liquid metal electrode is outfitted with a heating device.

23. (New) The plasma radiation source according to claim 21, wherein the carrier and the porous material are electrically conductive.

24. (New) The plasma radiation source according to claim 21, wherein the carrier and the porous material are not electrically conductive.

25. (New) The plasma radiation source according to claim 23, wherein the carrier and the porous material are chemically identical.

26. (New) The plasma radiation source according to claim 19, wherein a pinch effect generated by the current flow along the axis is additionally supported by an external magnetic field around the plasma.

27. (New) The plasma radiation source according to claim 26, wherein the external magnetic field is formed as a static magnetic field.

28. (New) The plasma radiation source according to claim 26, wherein the external magnetic field is adapted to the current flow through the plasma.

29. (New) The plasma radiation source according to claim 18, wherein laser radiation is used to excite plasma.

30. (New) The plasma radiation source according to claim 18, wherein a reflector is provided adjacent to a source region for the plasma along the axis of the mean propagation direction of the radiation, which reflector refocuses the radiation through the plasma.

31. (New) The plasma radiation source according to claim 18, wherein the gas curtain is adjacent to the source region along the axis of the mean propagation direction of the radiation exclusively on the side of an application region.

32. (New) The plasma radiation source according to claim 30, wherein the gas curtain is adjacent to the source region along the axis of the mean propagation direction of the radiation on both sides.

33. (New) An arrangement for generating a gas curtain as a filter for particles in radiation whose mean propagation direction extends in a vacuum chamber along an axis directed through the gas curtain, comprising:

a gas jet vacuum pump with a propulsion nozzle being arranged on an axis for generating a supersonic gas jet for the gas curtain and directing the supersonic gas jet radially to an annular mixing nozzle of the gas jet vacuum pump;

said mixing nozzle being arranged coaxial to the axis; and

a diffuser being provided for guiding the supersonic gas jet out of the vacuum chamber.

34. (New) A gas jet vacuum pump comprising:

an annular mixing nozzle having a gas inlet opening which faces the annular center;

a propulsion nozzle being arranged in the annular center for generating a supersonic gas jet that proceeds radially from the propulsion nozzle and is directed to the gas inlet opening; and

an annular diffuser which works so as to be directed away from the annular center.